



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|-------------|----------------------|---------------------|-----------------------------------|
| 10/678,879 | 10/03/2003 | John Grunwald | 26223-09A | 1307 |
| 7590 | 06/29/2004 | | | EXAMINER MARCHESCHI, MICHAEL A |
| John L. Cordani Carmody & Torrance LLP 50 Leavenworth Street P.O. Box 1110 Waterbury, CT 06721-1110 | | | ART UNIT 1755 | PAPER NUMBER |
| DATE MAILED: 06/29/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|------------------------|---------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 10/678,879 | GRUNWALD, JOHN |
| | Examiner | Art Unit |
| | Michael A Marcheschi | 1755 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
 2a) This action is FINAL. 2b) This action is non-final.
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-22 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) Claim(s) _____ is/are allowed.
 6) Claim(s) 1-22 is/are rejected.
 7) Claim(s) _____ is/are objected to.
 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
 10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>10/3/2003</u> . | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____ |

Claim 22 is rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 22 is indefinite in view of the phrase “A CMP slurry composition according to claim 1” because claim 1 is not directed to a CMP slurry.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(c) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10, 14-19 and 21-22 are rejected under 35 U.S.C. 102(a or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Grumbine et al.

Grumbine et al. teaches in column 3, lines 4-45 and column 8, lines 35-36, an abrasive material (for CMP applications (i.e. integrated circuit)) comprising abrasive particles (various one defined), wherein the abrasive particles can be coated metal oxides abrasives OR CHEMICAL ADMIXTURES of the various abrasive particles. The abrasive particles are modified with a silane (polymer) on the surface thereof (i.e. coating). It is also shown that the particles are colloidal (i.e. colloid).

The claimed invention is anticipated by the reference because the reference teaches all of the claimed features defined by the rejected claims above. For example, the reference states that the abrasive particles can be coated metal oxides abrasives OR CHEMICAL ADMIXTURES of the various abrasive particles and “chemical admixtures” reads on a composite. The abrasive particles are modified with a silane (polymer) on the surface thereof (i.e. reads on a polymer coating). Finally, the particles are colloidal (i.e. reads on a colloid). In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention absent evidence to the contrary.

Claims 1-4 and 6-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Towery et al.

Towery et al. teaches in the abstract, column 3, lines 5-8, column 9, lines 16-22, column 12, lines 22-55, column 13, lines 5-7 and claim 6, an abrasive material (for CMP applications (i.e. integrated circuit)) comprising abrasive particles (various one defined), wherein the abrasive

particles can be coated metal oxides abrasives (coating with a chemically active metal oxide (i.e. tin oxide). Column 9, lines 17-20 teaches and column 12, lines 48-50 implies that composite abrasives particles can also be used. In column 13, lines 5-8, the reference states that the particles can be adhered to a pad (i.e. reads on a fixed pad). The abrasive particles are composite particles and have a sized defined in column 3, lines 54-60 (i.e. size defined reads on a colloid).

The claimed invention is anticipated by the reference because the reference teaches all of the claimed features defined by the rejected claims above. For example, the reference states that the abrasive particles can be coated metal oxides abrasives or composite particles. The reference also states that the particles can be adhered to a pad (i.e. reads on a fixed pad). Finally, the particles are colloidal (i.e. reads on a colloid). In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention absent evidence to the contrary. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention absent evidence to the contrary.

Claims 1-3, 6, 14, 17, 19 and 21-22 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Lee et al.

Lee et al. teaches in the abstract, an abrasive material (for CMP applications (i.e. integrated circuit)) comprising abrasive particles, wherein the abrasive particles are composite particles and have a sized defined in column 3, lines 54-60 (i.e. size defined reads on a colloid).

The claimed invention is anticipated by the reference because the reference teaches all of the claimed features defined by the rejected claims above. For example, the particle size of the

abrasive is defined and this reads on a colloid. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention absent evidence to the contrary.

Claim 5 is rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yoshikawa et al.

Yoshikawa et al. teaches in the claims, an abrasive material comprising abrasive particles, wherein the abrasive particles can be coated with a metal bearing layer and a polymer layer.

The claimed invention is anticipated by the reference because the reference teaches all of the claimed features defined by the rejected claim above. In the alternative, no patentable distinction is seen to exist between the reference and the claimed invention absent evidence to the contrary.

Claim 21 is rejected under 35 U.S.C. 102(a or e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Jernakoff et al.

Jernakoff et al. teaches in the claims, an abrasive material (for CMP applications (i.e. integrated circuit)) comprising abrasive particles, wherein the abrasive particles are colloidal (i.e. colloid).

The claimed invention is anticipated by the reference because the reference teaches all of the claimed features defined by the rejected claim above. For example, the reference states that the abrasive particles are colloidal (i.e. reads on a colloid). In the alternative, no patentable

distinction is seen to exist between the reference and the claimed invention absent evidence to the contrary.

In view of the teachings as set forth above, it is the examiners position that the references reasonably teach or suggest the limitations of the rejected claims.

"A reference is good not only for what it teaches but also for what one of ordinary skill might reasonably infer from the teachings. *In re Opprecht* 12 USPQ 2d 1235, 1236 (CAFC 1989); *In re Bode* USPQ 12; *In re Lamberti* 192 USPQ 278; *In re Bozek* 163 USPQ 545, 549 (CCPA 1969); *In re Van Mater* 144 USPQ 421; *In re Jacoby* 135 USPQ 317; *In re LeGrice* 133 USPQ 365; *In re Preda* 159 USPQ 342 (CCPA 1968)". In addition, "A reference can be used for all it realistically teaches and is not limited to the disclosure in its preferred embodiments" See *In re Van Marter*, 144 USPQ 421.

Evidence of unexpected results must be clear and convincing. *In re Lohr* 137 USPQ 548. Evidence of unexpected results must be commensurate in scope with the subject matter claimed. *In re Linder* 173 USPQ 356.

The additional references cited on the 1449 have been reviewed by the examiner and are considered to be art of interest since they are cumulative to or less than the art relied upon in the above rejections.

The foreign documents on the 1449 have not be considered because they have not been submitted in the file.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael A Marcheschi whose telephone number is (571) 272-1374. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

Art Unit: 1755

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark L Bell can be reached on (571) 272-1362. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael A Marcheschi
Primary Examiner
Art Unit 1755

MM
6/24/04